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EXAMINER

OPSASNICK, MICHAEL N

ART UNIT	PAPER NUMBER
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2655

DATE MAILED: 02/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/650,173	Applicant(s) LEE, NICHOLAS J.	
	Examiner Michael N. Opsasnick	Art Unit 2655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/20/2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-55 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-55 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Information Summary (PTO-810) Paper No(s) _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. In view of newly found prior art, prosecution on the merits remains open. (Furthermore, the following office action clarifies issues that have come into question in the paper filed 9/10/2004).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 50 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brotman et al (5917889) in view of Gould et al (6839669).

As per claim 50, Brotman et al (5917889) teaches a method of capturing a search query specified by a user by telephone (Brotman et al (5917889), col. 4 lines 5-15; col. 4 lines 15-30), the method comprising:

“receiving from the user an indication”, “of the characters contained in the search query, said indication of”, “characters being specified at least in part as telephone keypad entries” as the user entering DTMF strings corresponding to the query of the user (col. 4 lines 15-27);

“receiving from the user a voice utterance that represents the entire search query” (fig. 2, subblock 650);

“interpreting the voice utterance using a voice recognition grammar that corresponds to the indication of”, “of characters, said voice recognition grammar specifying valid utterances” as the system of Brotman et al (5917889) creates a limited domain recognition grammar from the set of characters (Fig. 2, subblock 630), interprets the speech utterance according to the new grammar (Fig. 2, subblocks 650-700), and validating the utterance (Fig. 2, subblock 690,700,710, and 730).

The system of Brotman et al (5917889), however, does not explicitly teach using a subset of the character string to be input by the keypad; however, Gould et al (6839669) teaches a speech recognition system (col. 1 lines 58-62) wherein a partial spelling of a whole word is used to further limit domain choices (Fig. 34B; as the characters of the word “kibitzers” is entered as “kibi”, the system actively reduces the domain into values that match the initial “kibi”). Therefore, it would have been obvious to one of ordinary skill in the art of speech recognition to modify the recognition program as taught by Brotman et al (5917889) with a limited number of characters because it would advantageously offer the user a choice of corresponding words from the grammar, rather than limiting the choices (to be a single choice – confirmation or rejecting of a closest match) (Gould et al (6839669), col. 79 lines 39-56).

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4. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Loghmani et al (6377927) in view of Brotman et al (5917889) in further view of Weber (6434524).

As per claims 1, 14, Loghmani et al (6377927) teaches prompting a user to enter a voice query for searching a domain of items (as use inputting a query to shop for books – col. 9 line 58 – col. 10 line 10), wherein the input is voice input (fig. 10, via telephone, and thru voice query – col. 10 line 10), and the results are presented back to the user, via voice (col. 10 lines 25-29). The voice recognition uses a voice optimized database to interpret the user's input (col. 4 lines 38-55; fig. 6).

Loghmani et al (6377927) does not explicitly teach prompting the user to submit a set of characters with respect to the original input, however, Brotman et al (5917889) teaches a processing environment wherein the system prompts a user for character input (col. 1 lines 40-55), narrowing down the domain based on the character input (Fig. 2, subblock 630); creating a dynamic grammar based upon the character input (Fig. 2, subblock 630), and prompting the user to input the voice version of the character input (Fig. 2, subblocks 640-690). Therefore, it would have been obvious to one of ordinary skill in the art of speech recognition to add to the speech recognition process of Loghmani et al (6377927) a prompt for the user to specify characters and to verify the input because it would advantageously reduce the domain field of choices, as well as improving the accuracy process in using the dual character input and followup speech

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verification (Brotman et al (5917889), col. 1 lines 40-45, referring back to col. 1 lines 10-26).

To summarize, the combination of Loghmani et al (6377927) in view of Brotman et al (5917889) teaches a system performing a voice query to search a domain of items, returning a domain of results based on the voice query, prompting the user to enter characters, the system generating a further limited domain, the system prompting an utterance indicative of the characters, and the system inquiring if the generated string is the intended string.

The combination of Loghmani et al (6377927) in view of Brotman et al (5917889) does not explicitly teach updating the dynamic grammar to reflect valid utterances, however, Weber (6434524) teaches the updating of dynamic grammar based upon successful utterance matches (Weber (6434524), , col. 13 lines 13-23). Therefore, it would have been obvious to one of ordinary skill in the art of speech recognition technologies to modify the teachings of Loghmani et al (6377927) in view of Brotman et al (5917889) with updating the dynamic grammar for the user because it would advantageously deal with the voice idiosyncrasies of individual users (Weber (6434524), col. 13 lines 23-24).

As per claim 2, using the combination of Loghmani et al (6377927) in view of Brotman et al (5917889) in further view of Weber (6434524), Brotman et al (5917889) teaches “prompting a user.....query term” as N character submission (col. 4 lines 36-41)

As per claims 3-6, using the combination of Loghmani et al (6377927) in view of Brotman et al (5917889) in further view of Weber (6434524), Weber (6532444) teaches using subcategories labeled as “author” (Weber, col. 6 lines 56-63), as well as Loghmani et al (6377927) (col. 10, line 1)

As per claim 7, using the combination of Loghmani et al (6377927) in view of Brotman et al (5917889) in further view of Weber (6434524), Brotman et al (5917889) teaches user selected keypad entry (col. 4 lines 36-41)

As per claim 8, using the combination of Loghmani et al (6377927) in view of Brotman et al (5917889) in further view of Weber (6434524), Brotman et al (5917889) teaches “user uttering the characters and using the keypad entries of the.....character” as using utterances to match (col. 4 lines 15-35).

As per claim 9, using the combination of Loghmani et al (6377927) in view of Brotman et al (5917889) in further view of Weber (6434524), Brotman et al (5917889) teaches dynamic grammar usage (col. 4 lines 47-52)

As per claim 10, using the combination of Loghmani et al (6377927) in view of Brotman et al (5917889) in further view of Weber (6434524), Brotman et al (5917889) teaches extracting text from a subset of items derived from a database (col. 5 lines 25-30)

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As per claim 11, using the combination of Loghmani et al (6377927) in view of Brotman et al (5917889) in further view of Weber (6434524), Brotman et al (5917889) teaches storage of the subset (col. 5 lines 18-24)

As per claim 12, using the combination of Loghmani et al (6377927) in view of Brotman et al (5917889) in further view of Weber (6434524), Brotman et al (5917889) teaches a fixed number of input characters (col. 5 lines 25-30)

As per claim 13, using the combination of Loghmani et al (6377927) in view of Brotman et al (5917889) in further view of Weber (6434524), Brotman et al (5917889) teaches determination of a threshold number of characters (col. 5 lines 25-30).

5. Claims 15-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Loghmani et al (6377927) in view of Brotman et al (5917889) in further view of Weber (6434524).

As per claims 15,16,24-26,33,35,36,40-43,48-51,54,55 Loghmani et al (6377927) teaches prompting a user to enter a voice query for searching a domain of items (as use inputting a query to shop for books –col. 9 line 58 – col. 10 line 10), wherein the input is voice input (fig. 10, via telephone, and thru voice query – col. 10 line 10), and the results are presented back to the user, via voice (col. 10 lines 25-29). The voice recognition uses a voice optimized database to interpret the user's input (col. 4 lines 38-55; fig. 6).

Loghmani et al (6377927) does not explicitly teach prompting the user to submit a set of characters with respect to the original input, however, Brotman et al (5917889) teaches a processing environment wherein the system prompts a user for character input (col. 1 lines 40-55), narrowing down the domain based on the character input (Fig. 2, subblock 630); creating a dynamic grammar based upon the character input (Fig. 2, subblock 630), and prompting the user to input the voice version of the character input (Fig. 2, subblocks 640-690). Therefore, it would have been obvious to one of ordinary skill in the art of speech recognition to add to the speech recognition process of Loghmani et al (6377927) a prompt for the user to specify characters and to verify the input because it would advantageously reduce the domain field of choices, as well as improving the accuracy process in using the dual character input and followup speech verification (Brotman et al (5917889), col. 1 lines 40-45, referring back to col. 1 lines 10-26).

To summarize, the combination of Loghmani et al (6377927) in view of Brotman et al (5917889) teaches a system performing a voice query to search a domain of items, returning a domain of results based on the voice query, prompting the user to enter characters, the system generating a further limited domain, the system prompting an utterance indicative of the characters, and the system inquiring if the generated string is the intended string.

The combination of Loghmani et al (6377927) in view of Brotman et al (5917889) does not explicitly teach updating the dynamic grammar to reflect valid utterances, however, Weber (6434524) teaches the updating of dynamic grammar based

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upon successful utterance matches (Weber (6434524)), col. 13 lines 13-23). Therefore, it would have been obvious to one of ordinary skill in the art of speech recognition technologies to modify the teachings of Loghmani et al (6377927) in view of Brotman et al (5917889) with updating the dynamic grammar for the user because it would advantageously deal with the voice idiosyncrasies of individual users (Weber (6434524), col. 13 lines 23-24).

As per claims 17-19,20,27, using the combination of Loghmani et al (6377927) in view of Brotman et al (5917889) in further view of Weber (6434524), Weber (6532444) teaches using subcategories labeled as “author” (Weber, col. 6 lines 56-63), as well as Loghmani et al (6377927) (col. 10, line 1).

As per claims 20,29,44,45, using the combination of Loghmani et al (6377927) in view of Brotman et al (5917889) in further view of Weber (6434524), Brotman et al (5917889) teaches “prompting a user.....query term” as N character submission (col. 4 lines 36-41)

As per claims 21,22, and 32,46, using the combination of Loghmani et al (6377927) in view of Brotman et al (5917889) in further view of Weber (6434524), Brotman et al (5917889) teaches user selected keypad entry (col. 4 lines 36-41)

As per claims 23,37, using the combination of Loghmani et al (6377927) in view of Brotman et al (5917889) in further view of Weber (6434524), Brotman et al (5917889) teaches determination of a threshold number of characters (col. 5 lines 25-30).

As per claims 28,38, using the combination of Loghmani et al (6377927) in view of Brotman et al (5917889) in further view of Weber (6434524), Brotman et al (5917889) teaches storage of the subset (col. 5 lines 18-24)

As per claim 30, using the combination of Loghmani et al (6377927) in view of Brotman et al (5917889) in further view of Weber (6434524), Weber (6532444) teaches using subcategories labeled as “author” (Weber, col. 6 lines 56-63), as well as Loghmani et al (6377927) (col. 10, line 1).

As per claim 31, using the combination of Loghmani et al (6377927) in view of Brotman et al (5917889) in further view of Weber (6434524), Brotman et al (5917889) teaches a fixed number of input characters (col. 5 lines 25-30)

As per claim 33, the combination of Loghmani et al (6377927) in view of Brotman et al (5917889) in further view of Weber (6434524) teaches the first query as the voice query, and then a second query as the character input/voice verification input, as discussed above.

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As per claims 34,47, using the combination of Loghmani et al (6377927) in view of Brotman et al (5917889) in further view of Weber (6434524), Brotman et al (5917889) teaches dynamic grammar usage (col. 4 lines 47-52)

As per claims 39,51,54, using the combination of Loghmani et al (6377927) in view of Brotman et al (5917889) in further view of Weber (6434524), Brotman et al (5917889) teaches extracting text from a subset of items derived from a database (col. 5 lines 25-30)

As per claims 46,52, using the combination of Loghmani et al (6377927) in view of Brotman et al (5917889) in further view of Weber (6434524), Brotman et al (5917889) teaches “user uttering the characters and using the keypad entries of the.....character” as using utterances to match (col. 4 lines 15-35).

Response to Arguments

6. Applicant's arguments filed 9/4/2004 have been fully considered but they are not persuasive. As to the clarification of claim 30, examiner has included the rejection of claim 30 noted above (examiner also notes that the claim scope of claim 30 is very similar to the claim scope of claim 3, which was addressed in the previous office action). The status of claims 17-19, and 27 is clear as per the obviousness rejection presented in the office action. As to the argument presented in the last paragraph on page 4 of the response, examiner argues that the

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combination of the Loghmani and Brotman references would make the process more accurate. As per the discussion on page 5 of the response with respect to the Weber reference, examiner notes that the Weber reference is introduced for the purposes of updating the dynamic grammar (of which limitation was of concern to the applicant on pages 7-8 of the response dated 5/24/2004). With respect to the arguments presented in the first two paragraphs on page 6 of the response, examiner argues that the need of Loghmani reference is to perform a speech recognition along with character identification. The character identification of Brotman would further resolve any voice recognition ambiguities, and the voice recognition aspect of Loghmani would further limit any character entry ambiguities. In fact, on page 4 of the response, the applicant argues an increase in efficiency when combining both techniques. Continuing to the following paragraph on page 6 of the response, examiner argues that applicant's representative contradicts himself with the statement referring to the combination of the two references being an unnecessarily burdensome process because on page 3 (in the discussion of the Loghmani et al reference) of the response, the process of Loghmani produces multiple possible results for the query (and clearly reducing that number of possible results would improve the accuracy and speed of the system, via character limitation as taught by Brotman). In fact, reversing the two references would also lead an improvement in the recognition accuracy and speed, because the voice recognition would reduce the number of interactions of the user with character recognition results (in the Brotman reference). With respect to applicant's arguments on the bottom of page 6 to the Weber reference, examiner argues that the introduction of the Weber reference is to teach updating of the dynamic grammars to reflect valid utterances. The application of the Weber reference answers the concern of the applicant in the response dated 5/24/2004, age 2-8,

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and to the argument of creating a dynamic grammar (and in fact, also located on page 7 of applicant's current response). As per applicant's arguments on page 8 of the response, examiner disagrees with the arguments towards "a portion" and notes that the current claim language refers to "a portion of the search query" and not a "portion of the characters" of the search query – in the case of applicant's example of Brotman entering digits "4", "7", and "2", the user may be entering "IRA", however, there are 27 character possibilities out of the three numbers, such as "GPA", "GPB", "GPK", "GRA", "ISC". The possible search query is a set of 27 possibilities, in this instance, with the user wanting "IRA" as a subset, or portion, of the overall set of 27 possibilities. Furthermore, the set of 27 possibilities in itself represent a subset of all 9 keypad character possibilities; in other words, Brotman represents a reduction in the set of possible search queries. Furthermore, applicant's representative fails to provide arguments to the combination of the references → one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

With respect to the rebuttal against claim 15, examiner notes that the rebuttal with respect to a portion of the query is addressed above (the paragraph preceding this paragraph), and that the "Claim 15 also recites.....Office Action", the applicant is Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

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With respect to the common rebuttal points against claims 24,33,43, and 50 examiner points to the arguments presented above.

Examiner also notes that applicant's representative is missing arguments as to how the current claim limitations differ from the combination of references as presented by the examiner → one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please see related art listed on the PTO-892 form.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Opsasnick, telephone number (571)272-7623, who is available Tuesday-Thursday, 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Wayne Young, can be reached at (571)272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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1/19/2006


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